

## chapter 6



*Accidental Tourist: Jenny at school in Busan, Korea.*

## drive

Eric got on the crowded No. 80 bus, headed home after Saturday classes. The girls had stopped screaming; Eric's celebrity status had faded. He spent a lot of his time reading *Ulysses* by himself.

"Hi. How's it going?"

Eric looked up. A Korean girl with shoulder-length black hair pushed back behind a headband was talking to him with a pitch-perfect American accent. He'd seen her around Namsan, and he knew she lived in the same apartment complex, but he hadn't heard such a familiar inflection in anyone's voice since he'd left Minnesota.

"My name is Jenny." She had a low voice and a stoic expression. But then she smiled, and her whole face lit up. Eric smiled, too.

"Why is your English perfect?"

Jenny laughed. She explained that although she was born in Korea, she'd lived in Lincoln, Nebraska, and Pittsburgh, Pennsylvania, when she was little. She'd spent much of her childhood in the American heartland, which explained her accent. But then, when she

was in middle school, her family had moved back to Korea. Coming back to Korean school had been a traumatic experience, and she knew exactly how Eric was feeling.

"I couldn't believe it when I saw all the kids sleeping in class," she said. "But soon I was one of them."

In the United States, Jenny had taken swimming lessons and played the cello. She'd gone to sleep by ten most nights. Then, in Korea, she'd started attending hagwons like all the other kids she knew. She almost always studied past midnight. Jenny was living proof of something researchers call the peer effect: She behaved differently depending on the kids sitting next to her.

"I just felt the need to study here because all my friends were doing the same thing."

Eric talked with Jenny all the way back to the apartment building. He felt relieved to have a real Korean validate his impressions. He wasn't just a white boy who didn't get it; in fact, Korean high school was objectively terrible. They agreed.

"Kids are the same in both countries," Jenny said. "They're kids! The difference is the way they've been raised. They have this thing, Korean kids; this thing that drives them."

And now Jenny had it, too. She ranked twenty-seventh in her sophomore class at Namsan, out of about four hundred students. She had different standards for herself than she'd had in the States. "I need to do better. I regret not working harder this year," she told Eric, shaking her head. She looked genuinely distressed, despite how well she had done. Eric was perplexed. It was like listening to an Olympic swimmer complain about being out of shape. Jenny was in the top 10 percent of her class, but it wasn't enough. He started to realize that there was a masochism around studying that united Korean students. They berated themselves to keep themselves going.

Like most Koreans he had met, Jenny had high expectations for herself and a low opinion of her performance. He wondered if she would have judged herself differently if she'd stayed in the United

States. Would her standards have slipped down to earth, just the way they'd rocketed to the stars in Korea? Was drive entirely relative?

Jenny was about to find out. Next year, she told Eric, she had to go back to the United States, this time to New Jersey. Her family was moving yet again.

"I don't want to leave my friends," Jenny said, her face darkening. "But they keep telling me how jealous they are—that I'm escaping."

### the geography of parenting

Back at the apartment, Eric took out the Nintendo DS he'd brought from home. His younger host brother recognized it like an old friend, and started asking Eric all about the games he played.

"Do you want to play?" Eric offered.

"No, no, I can't," he said, shaking his head.

A while back, his mother had caught his older brother playing his Nintendo DS before he'd finished his homework, so she'd confiscated his game console. That wasn't all; to make her disapproval widely known, she had also taken away the younger brother's Nintendo DS. He was entirely innocent, but months later, he still had not gotten the game console back. He didn't know if he would ever get it back.

When it came to education, Eric's host mother did not send mixed messages. She cooked dinner for her kids every night and worked hard to make every opportunity available to them; but on the subject of studying, she did not negotiate. They had to work hard—especially in English—and school took priority over everything else.

She did not hold the American to the same standards, for which Eric was very grateful. She treated him with patience and kindness, as if he were an adorable grandson. Yet she dealt with her own kids the way a coach might treat his star players. Her job was to train those kids, to push them, and even bench them to prove a point. Her job was not to protect them from strain.

From what Eric had seen, his host mom was not unusual. Most

Korean parents saw themselves as coaches, while American parents tended to act more like cheerleaders. He could tell that Korean kids encountered high expectations very early in their lives, and not just in school.

Parenting, like drive and diligence, was often ignored in international studies of education. The evidence that did exist tended to focus on one country only, and it generally showed what you'd expect: More involved families had children with higher grades, better test scores, improved behavior, and better attendance records. That dynamic held true across all ages, races, and income levels in the United States. But what kinds of parental involvement mattered most? And did parents do different things in different countries?

Andreas Schleicher, the PISA scientist, noticed after the first PISA test in 2000 that a student's home environment dramatically affected scores. He wanted to know more about how families shaped education, so he tried to get all the participating countries to agree to survey parents. Most countries' officials were more interested in the traditional levers of education policy, however: the in-school factors like spending and class size that they felt they could control, which was a pity, since parents could control a lot, too, if they knew what mattered.

By 2009, Schleicher and his colleagues had managed to convince thirteen countries and regions to include parents in the PISA. Five thousand of the students who took the PISA test brought home a special survey for their parents. The survey asked how they had raised their children and participated in their education, starting from when they were very young.

Strange patterns emerged. For example, parents who volunteered in their kids' extracurricular activities had children who performed *worse* in reading, on average, than parents who did not volunteer, even after controlling for other factors like socioeconomic background. Out of thirteen very different places, there were only two (Denmark and New Zealand) in which parental volunteering had any positive impact on scores at all, and it was small.

How could this be? Weren't the parents who volunteered in the school community showing their children how much they valued education? Weren't the mothers who chaperoned field trips and fathers who brought orange slices to soccer games the ones with the most time and energy to devote to their children? The data was baffling. Yet other research within the United States revealed the same mysterious dynamic: volunteering in children's schools and attending school events seemed to have little effect on how much kids learned.

One possible explanation might be that the parents who were volunteering were more active precisely *because* their children were struggling at school. And it is possible that their children would have performed even worse if the parents had *not* gotten involved. Then again, maybe the volunteering parents were spending their limited time coaching basketball and running school auctions, leaving less energy for the kinds of actions that *did* help their kids learn.

By contrast, other parental efforts yielded big returns, the survey suggested. When children were young, parents who read to them every day or almost every day had kids who performed much better in reading, all around the world, by the time they were fifteen. It sounded like a public-service cliché: Read to your kids. Could it be that simple?

Yes, it could, which was not to say that it was uninteresting. After all, what did reading to your kids mean? Done well, it meant teaching them about the world—sharing stories about faraway places, about smoking volcanoes and little boys who were sent to bed without dinner. It meant asking them questions about the book, questions that encouraged them to think for themselves. It meant sending a signal to kids about the importance of not just reading but of learning about all kinds of new things.

As kids got older, the parental involvement that seemed to matter most was different but related. All over the world, parents who discussed movies, books, and current affairs with their kids had teenagers who performed better in reading. Here again, parents who en-

gaged their kids in conversation about things larger than themselves were essentially teaching their kids to become thinking adults. Unlike volunteering in schools, those kinds of parental efforts delivered clear and convincing results, even across different countries and different income levels.

In fact, fifteen-year-olds whose parents talked about complicated social issues with them not only scored better on PISA but reported enjoying reading more overall. In New Zealand and Germany, students whose parents had read to them regularly in their early elementary years performed almost a year and a half ahead of students whose parents had not.

Research from within the United States echoed these findings. What parents did with children at home seemed to matter more than what parents did to help out at school. And yet this finding ran counter to the ideals of modern American parenting.

Stereotypically speaking, American parenting in the early twenty-first century might have been called Parent Teacher Association parenting. PTA parents cared deeply about their children and went out of their way to participate in school functions. They knew education was important, and in fact, American parents tended to be more highly educated than parents in most developed countries.

At the same time, many American parents worried about robbing their children of the joys of childhood through structured learning. They suspected that children learned best through undirected free play—and that a child's psyche was sensitive and fragile. During the 1980s and 1990s, American parents and teachers had been bombarded by claims that children's self-esteem needed to be protected from competition (and reality) in order for them to succeed. Despite a lack of evidence, the self-esteem movement took hold in the United States in a way that it did not in most of the world. So, it was understandable that PTA parents focused their energies on the nonacademic side of their children's school. They dutifully sold cupcakes at the bake sales and helped coach the soc-

cer teams. They doled out praise and trophies at a rate unmatched in other countries. They were their kids' boosters, their number-one fans.

These were the parents that Kim's principal in Oklahoma praised as highly involved. And PTA parents certainly contributed to the school's culture, budget, and sense of community. However, there was not much evidence that PTA parents helped their children become critical thinkers. In most of the countries where parents took the PISA survey, parents who participated in a PTA had teenagers who performed worse in reading.

Korean parenting, by contrast, were coaches. Coach parents cared deeply about their children, too. Yet they spent less time attending school events and more time training their children at home: reading to them, quizzing them on their multiplication tables while they were cooking dinner, and pushing them to try harder. They saw education as one of their jobs.

This kind of parenting was typical in much of Asia—and among Asian immigrant parents living in the United States. Contrary to the stereotype, it did not necessarily make children miserable. In fact, children raised in this way in the United States tended not only to do better in school but to actually enjoy reading and school more than their Caucasian peers enrolled in the *same* schools.

While American parents gave their kids placemats with numbers on them and called it a day, Asian parents taught their children to add before they could read. They did it systematically and directly, say, from six-thirty to seven each night, with a workbook—not organically, the way many American parents preferred their children to learn math.

The coach parent did not necessarily have to earn a lot of money or be highly educated. Nor did a coach parent have to be Asian, needless to say. The research showed that European-American parents who acted more like coaches tended to raise smarter kids, too.

Parents who read to their children weekly or daily when they

were young raised children who scored twenty-five points higher on PISA by the time they were fifteen years old. That was almost a full year of learning. More affluent parents were more likely to read to their children almost everywhere, but even among families within the same socioeconomic group, parents who read to their children tended to raise kids who scored fourteen points higher on PISA. By contrast, parents who regularly played with alphabet toys with their young children saw no such benefit.

And at least one high-impact form of parental involvement did not actually involve kids or schools at all: If parents simply read for pleasure at home on their own, their children were more likely to enjoy reading, too. That pattern held fast across very different countries and different levels of family income. Kids could see what parents valued, and it mattered more than what parents said.

Only four in ten parents in the PISA survey regularly read at home for enjoyment. What if they knew that this one change—which they might even vaguely enjoy—would help their children become better readers themselves? What if schools, instead of pleading with parents to donate time, muffins, or money, loaned books and magazines to parents and urged them to read on their own and talk about what they'd read in order to help their kids? The evidence suggested that every parent could do things that helped create strong readers and thinkers, once they knew what those things were.

Parents could go too far with the drills and practice in academics, just as they could in sports, and many, many Korean parents did go too far. The opposite was also true. A coddled, moon bounce of a childhood could lead to young adults who had never experienced failure or developed self-control or endurance—experiences that mattered as much or more than academic skills.

The evidence suggested that many American parents treated their children as if they were delicate flowers. In one Columbia University study, 85 percent of American parents surveyed said that they thought they needed to praise their children's intelligence in order to

assure them they were smart. However, the actual research on praise suggested the opposite was true. Praise that was vague, insincere, or excessive tended to discourage kids from working hard and trying new things. It had a toxic effect, the opposite of what parents intended.

To work, praise had to be specific, authentic, and rare. Yet the same culture of self-esteem boosting extended to many U.S. classrooms. In the survey of exchange students conducted for this book, about half of U.S. and international students said that American math teachers were more likely to praise their work than math teachers abroad. (Fewer than 10 percent said that their international teachers were more likely to praise.) That finding was particularly ironic, given that American students scored below average for the developed world in math. It also suggested that whatever the intent of American teachers, their praise was probably not always specific, authentic, and rare.

Adults didn't have to be stern or aloof to help kids learn. In fact, just asking children about their school days and showing genuine interest in what they were learning could have the same effect on PISA scores as hours of private tutoring. Asking serious questions about a child's book had more value than congratulating the child for finishing it, in other words.

Around the world, people who studied parenting usually divided the various styles into four basic categories: Authoritarian parents were strict disciplinarians, the "because I said so" parents. Permissive parents tended to be indulgent and averse to conflict. They acted more like friends than parents. In some studies, permissive parents tended to be wealthier and more educated than other parents. Neglectful parents were just how they sounded: emotionally distant and often absent. They were also more likely to live in poverty.

Then there was the fourth option: *Authoritative*. The word was like a mash up of authoritarian and permissive. These parents inhabited the sweet spot between the two: they were warm, responsive,

and close to their kids, but, as their children got older, they gave them freedom to explore and to fail and to make their own choices. Throughout their kids' upbringing, authoritative parents also had clear, bright limits, rules they did not negotiate.

"We're socialized to believe that warmth and strictness are opposites," Doug Lemov writes in his book *Teach Like a Champion*. "The fact is, the degree to which you are warm has no bearing on the degree to which you are strict, and vice versa." Parents and teachers who manage to be both warm *and* strict seem to strike a resonance with children, gaining their trust along with their respect.

When researcher Jelani Mandara at Northwestern University studied 4,754 U.S. teenagers and their parents, he found that kids with authoritative parents had higher academic achievement levels, fewer symptoms of depression, and fewer problems with aggression, disobedience, and other antisocial behaviors. Other studies have found similar benefits. Authoritative parents trained their kids to be resilient, and it seemed to work.

It is perilous to make sweeping generalizations about people based on their ethnic heritage, but the research does suggest patterns. In the United States, European-American parents are more likely to exhibit authoritative styles than Hispanic or African-American parents, who trend toward authoritarian styles of parenting. (Although all ethnicities include all four kinds of parents.) However, the Asian-American parenting style may be the most consistently authoritative.

For example, studies have shown that Chinese-American parents are more hands-on with their children when they are young, training them in the ways of reading, writing, and math, but then they give their kids significantly more autonomy as they get older (a model that sounds eerily similar to the stereotype of the Finnish parent). "In high school, Asian immigrant parents really have a more hands-off approach," says Ruth Chao, who has studied parenting styles for over two decades. "They're not doing direct instruction. They're not man-

aging the child's schoolwork anymore. They feel that if they are still having to do that, then there's really a problem."

After studying the data, Schleicher took his own advice. At his home in Paris, he and his wife were raising three children. They attended public school in a country that, like the United States, did not have strong PISA scores. Before he saw the research, he had always assumed that the ideal parent would spend several hours helping his children do their homework or complete other school projects. But there was a problem: He frequently didn't have several hours free to look over their shoulders. As a result, he did very little.

The data showed that he had more choices than he thought. From then on, even on his most hectic days, Schleicher at least asked his kids how school had gone, what they had learned, and what they had liked most. He talked to them about news and social issues of the day. He still didn't manage to read to his youngest daughter more often, but he at least knew what to feel guilty about—and what not to. Like every parent, he wanted his children to grow up to be thoughtful, curious, and smart. It was a relief to have strategies to influence their learning—regardless of what became of the French school system.

### the anxiety olympics

On the eve of the big test, Eric's classmates performed elaborate rituals. The younger students cleaned the classrooms for the seniors. They purged the walls of posters and even covered the flag so that test takers would be able to focus on the college entrance exam without any distractions.

At the supermarket, Eric saw special displays of fancy good-luck candies for parents to buy their test-taking children, amulets to protect them through this ordeal. On the street, parents filed into temples and churches to offer one last prayer.

The whole country obsessed over the test. Korea Electric Power Corp. sent out crew members to check the power lines serving each

of the one thousand test locations. The morning of the test, the stock market opened an hour late to keep the roads free for the more than six hundred thousand students headed to the test. Taxis gave students free rides.

That day, Eric took the bus to school as he normally did. But nothing was normal. As he got closer, he heard cheering. Some of his classmates had lined up outside the entrance to hand out tea to the test-takers and wave signs reading, "Hit the Jackpot!" The seniors trudged past them, heads down, like boxers entering a ring for a fight that would last nine hours. Police officers patrolled the school perimeter to discourage cars from honking their horns and distracting the students. Eric ran into a boy he knew, who explained that there was no school for younger students that day. Then he and Eric left to go play video games.

Later that morning, Eric went to Busan's Shinsegae Centum City, the largest department store in the world, to do some shopping. During the English language listening portion of the test, when airplanes were grounded to reduce unnecessary noise, Eric was in a movie theater.

By then, Eric had made a decision. He was going to drop out of Korean high school. He couldn't wait out the rest of the year this way. It felt like he spent every day in a huge cage, watching other kids run on a hamster wheel. The wheel never stopped; it thrummed day and night. And he was tired of sitting quietly in the wheel's shadow, waiting for his life in Korea to begin.

He needed to talk to kids if he was going to learn Korean and stay sane. He knew it was the right thing to do, but he was unsure how to do it. He hoped that leaving high school didn't mean he would have to leave Korea.

That evening, as Eric meandered through the city on his way back to the apartment, trucks delivered late-edition newspapers with the exam questions and answers for families to pore over at dinner. The entire spectacle felt melodramatic to Eric, like some kind of *Hunger Games* of the mind. Why did the whole country have to take the test



on the same day? Kids in Minnesota took the SAT multiple times a year without any disruption to normal life.

Still, a child growing up in Korea could not help but get the message: Education was a national treasure. Getting a good one mattered more than stock-market trades or airplane departures. And everyone, from parents to teachers to police officers, had a role to play.

### the mystery equation

Listening to the stories of Kim and Eric, I started to notice one fundamental theme. In Korea and Finland, despite all their differences, everyone—kids, parents, and teachers—saw getting an education as a serious quest, more important than sports or self-esteem. This consensus about the importance of a rigorous education led to all kinds of natural consequences: not just a more sophisticated and focused curriculum but more serious teacher-training colleges, more challenging tests, even more rigorous conversations at home around the dining room table. Everything was more demanding, through and through.

In these countries, people thought learning was so important that only the most educated, high-achieving citizens could be allowed to do the teaching. These governments spent tax money training and retaining teacher talent, rather than buying iPads for first graders or mandating small class sizes. It wasn't that public respect for teachers led to learning, as some American educators claimed after visiting Finland; it was that public respect for learning led to great teaching. Of course people respected teachers; their jobs were complex and demanding, and they had to work hard to get there.

One thing led to another. Highly educated teachers also chose material that was more rigorous, and they had the fluency to teach it. Because they were serious people doing hard jobs and everyone knew it, they got a lot of autonomy to do their work. That autonomy was another symptom of rigor. Teachers and principals had enough

leeway to do their jobs like true professionals. They were accountable for results, but autonomous in their methods.

Kids had more freedom, too. This freedom was important, and it wasn't a gift. By definition, rigorous work required failure; you simply could not do it without failing. That meant that teenagers had the freedom to fail when they were still young enough to learn how to recover. When they didn't work hard, they got worse grades. The consequences were clear and reliable. They didn't take a lot of standardized tests, but they had to take a very serious one at the end of high school, which had real implications for their futures.

As Kim had noticed, teenagers were expected to manage their own time, and they usually did. Interestingly, this was another difference that exchange students noticed. Six out of ten of those surveyed said that U.S. parents gave children less freedom than parents abroad. (Only one in ten said that U.S. parents allowed more freedom.) One Finnish student who had spent a year in the United States explained this difference this way:

"In the U.S., everything was very controlled and supervised. You couldn't even go to the bathroom without a pass. You had to turn all your homework in, but yet you didn't really have to think with your own brain or make any decisions of your own."

I'd been looking around the world for clues as to what other countries were doing right, but the important distinctions were not about spending or local control or curriculum; none of that mattered very much. Policies mostly worked in the margins. The fundamental difference was a psychological one.

The education superpowers believed in rigor. People in these countries agreed on the purpose of school: School existed to help students master complex academic material. Other things mattered, too, but nothing mattered as much.

That clarity of purpose meant everyone took school more seri-

ously, especially kids. The most important difference I'd seen so far was the drive of students and their families. It was viral, and it mattered more than I'd expected. Eric and his friend Jenny had reminded me what I'd forgotten in adulthood: Kids feed off each other. This feedback loop started in kindergarten and just grew more powerful each year, for better and for worse. Schools and parents could amp up student drive through smarter, more meaningful testing that came with real consequences for teenagers' lives; through generous grants of autonomy, the kind that involved some risk and some reward; and through higher quality, more challenging work, directed by the best educated teachers in the world. But those policies were born out of a pervasive belief in rigor. Without it, those things just didn't happen.

The question then was not *what* other countries were doing, but *why*. Why did these countries have this consensus around rigor? In the education superpowers, every child knew the importance of an education. These countries had experienced national failure in recent memory; they knew what an existential crisis felt like. In many U.S. schools, however, the priorities were muddled beyond recognition.

Sports were central to American students' lives and school cultures in a way in which they were not in most education superpowers. Exchange students agreed almost universally on this point. Nine out of ten international students I surveyed said that U.S. kids placed a higher priority on sports, and six out of ten American exchange students agreed with them. Even in middle school, other researchers had found, American students spent double the amount of time playing sports as Koreans.

Without a doubt, sports brought many benefits, including lessons in leadership and persistence, not to mention exercise. In most U.S. high schools, however, only a minority of students actually played sports. So they weren't getting the exercise, and the U.S. obesity rates reflected as much. And those valuable life lessons, the ones about leadership and persistence, could be taught through rigorous academic work, too, in ways that were more applicable to the real world. In many U.S. schools, sports instilled leadership and persistence in one group of

kids, while draining focus and resources from academics for everyone.

The lesson wasn't that sports couldn't coexist with education; it was that sports had nothing to do with education. In countries like Finland, sports teams existed, of course. They were run by parents or outside clubs. As teenagers got older, most of them shifted their focus from playing sports to academics or vocational skills—the opposite of the typical U.S. pattern. About 10 percent of Kim's classmates played sports in Finland, and they did so in community centers separate from school. Many of them quit senior year so that they would have time to study for their graduation exam. When I asked Kim's Finnish teacher if she knew any teachers who also worked as coaches, she could only think of one. "Teachers do a lot of work at school," she said, "and that's enough I guess."

Wealth had made rigor unnecessary in the United States, historically speaking. Kids didn't need to master complex material to succeed in life—not until recently, anyway. Other things crowded in, including sports, which embedded themselves in education systems, requiring principals to hire teachers who could also coach (or vice versa). The unholy alliance between school and sports pushed student athletes to spend extreme amounts of energy and time in training before and after school.

In isolation, there was nothing wrong with sports, of course. But they didn't operate in isolation. Combined with less rigorous material, higher rates of child poverty and lower levels of teacher selectivity and training, the glorification of sports chipped away at the academic drive among U.S. kids. The primacy of sports sent a message that what mattered—what really led to greatness—had little to do with what happened in the classroom. That lack of drive made teachers' jobs harder, undercutting the entire equation.

I found myself wishing I could travel back in time. Now that I knew what these nations had become, I wanted to see how they had gotten there. *How* did they arrive at a consensus about rigor? How had Finland and Korea done what Oklahoma could not?

In the twenty-first century, Finland was the obvious inspiration, a model for someday. It had achieved a balance and humanity that had



eluded Korea. But for most of the world, including the United States, the question was what needed to happen first to make someday possible.

### mapping willpower

In the mid-1970s, a small number of economists and sociologists started noticing that academic skills were not all important. It sounded obvious, but in the rush to count and compare IQ and reading scores, this simple truth was easily forgotten. Over the next three decades, more and more studies showed that when it came to predicting which kids grew up to be thriving adults—who succeeded in life and in their jobs—cognitive abilities only went so far.

Something else mattered just as much, and sometimes more, to kids' life chances. This other dark matter had more to do with attitude than the ability to solve a calculus problem. In one study of U.S. eighth graders, for example, the best predictor of academic performance was not the children's IQ scores—but their self-discipline.

Mastery of math never made anyone get to work on time, finish a thesis, or use a condom. No, those skill sets had more to do with motivation, empathy, self-control, and persistence. These were core habits, workhorse traits sometimes summed up by the old-fashioned word *character*.

The problem with the word *character* was that it sounded like something you couldn't change. But these same researchers discovered something wonderful: Character was malleable, more malleable in fact than IQ. Character could change dramatically and relatively quickly—for better and for worse—from place to place and time to time.

So it was fair to assume that different communities and cultures did more—or less—to promote these traits in their children. In Finland, Kim identified a difference that she thought mattered a lot: a difference, as she put it, in how much kids and teacher cared about school. Eric witnessed this drive, too, albeit the extreme and sometimes dysfunctional Korean version of the trait.

Caring about school was not the most important trait in a human being, to state the obvious. But, around the globe, this particular form of drive had begun to matter more than ever before, at least economically speaking. The research was still a long way off from identifying all the traits that mattered in young people's lives, but could drive be measured between countries? Was there any way to quantify what Kim and Eric had noticed? And could drive be cultivated in places that needed more of it?

Few people had tried to find out. Surveys tended to ask kids to describe their own motivation and attitude, which made it impossible to separate their answers from their own cultural biases. A student in Korea who said he didn't work hard had a very different understanding of *hard* than a typical student in the United Kingdom or Italy.

In 2002, researchers at the University of Pennsylvania had an idea. They thought they might be able to measure students' persistence and motivation by looking not at their answers to international tests, but at how thoroughly students answered the surveys included with those tests.

After the test portion of PISA and other international exams, students typically filled out surveys about their families and other life circumstances. There were no right answers for the questions on the surveys. In fact, the professors, Erling Boe, Robert Boruch, and a young graduate student, Henry May, weren't even interested in the answers. They wanted to track students' diligence in filling out the forms. So, they studied the survey attached to a 1995 test taken by kids of different ages in more than forty countries (called the "Trends in International Mathematics and Science Study").

The researchers encountered several surprises very quickly. First, students around the world were surprisingly compliant. The vast majority dutifully filled out most answers, even though the survey had no impact on their lives. The lowest response rate for any country was 90 percent. There was some variation from within a given country, but the variation didn't seem to reveal much about the students.

Between countries, though, the differences in diligence mattered—a lot. In fact, this difference turned out to be the single best predictor of how countries performed on the actual substantive portion of the test.

This simple measure—the thoroughness with which students answered the survey—was more predictive of countries' scores than socioeconomic status or class size or any other factor that had been studied.

How could this be? When May repeated the analysis with the 2009 PISA data, he found the same dynamic: Half the variation between countries' scores on the PISA math test could be explained by how much of the personal questionnaire students filled out on average in a given country.

In the United States, participants answered 96 percent of the survey questions on average, which seemed very respectable. Yet the U.S. still ranked thirty-third in conscientiousness. Korea ranked fourth. Finland ranked sixth. Kids there answered 98 percent of the questions. Seems virtually the same, right? But small differences in average response rates predicted large differences in academic performance on the same test.

Kids in Finland and Korea answered more of the demographic survey than those in the United States, France, Denmark, or Brazil. The causes of this pattern remain a mystery. May wondered if PISA and other international exams were measuring not skills but *compliance*; some countries had cultures in which kids just took all tests, and authority figures, more seriously. It wasn't a stretch to imagine that those countries included Japan, Korea, and other top PISA scorers. Perhaps that's why those kids answered the survey more thoroughly and did better on the academic questions, too. Those kids were just rule-abiding conformists. Other countries, meanwhile, valued individualism more than compliance. Perhaps those kids simply did not feel compelled to take the survey seriously. "In some nations," May said, "there are a lot of kids who seem like they just couldn't care less. They drag the mean down."

Then why did U.S. students do much better on the reading portion of the test, and so poorly on the math portion? If American kids just didn't care about tests or authority figures, generally speaking, then they would presumably do equally poorly on *all* tests. Likewise, we probably wouldn't see countries like Poland rocket up through the rankings in very short periods of time. It was hard to imagine that Poland had cultivated a culture of conformism in the course of three to nine years.

No one knows the answer for sure, but it's possible that the diligence kids showed in answering the survey reflected their diligence in general. In other words, maybe some kids had learned to finish what they started in school: to persist even when something held no particular gratification. The opposite was also true. Some kids had not learned to persist, and persistence was not valued as much in their school or in their societies at large.

Conscientiousness on a survey seemed like a trifling matter. In life, it was a big deal. Conscientiousness—a tendency to be responsible, hardworking, and organized—mattered at every point in the human life cycle. It even predicted how long people lived—with more accuracy than intelligence or background.

What would a map of conscientiousness look like? Maybe it was less important to find the smart kids, and more important to find the ones who got the job done, whatever the job was. Were there certain cultures that cultivated conscientiousness the way that other cultures cultivated gymnasts or soccer players?

The survey results provided some clues, not all of them obvious. The countries with kids who took the survey most seriously were not necessarily places with the richest kids; affluence does not necessarily lead to persistence, as we all know. In fact, the country with the highest response rate on the survey had nearly the same level of child poverty as that of the United States.

That country was Poland.